

Remarks

The application identified above has been amended in response to the final Office Action dated June 23, 2003. Claims 1-3, 5, 21 and 37 have respectively been amended to further emphasize patentably distinguishing features of the invention, as well as to provide Applicants with the full scope of protection to which they deem their invention entitled. Claims 4, 6-20, 22-36 and 38-45 remain in their respective original forms.

Applicants mailed a document entitled Applicants' Response under 37 C.F.R. §1.111, regarding the above application, to the U.S. Patent and Trademark Office on January 21, 2003. Comments and remarks set forth in this document are incorporated herein by reference.

In the Office Action, the Examiner rejected Applicants' Claims 1-45 under 35 USC §103(a), as being obvious in view of U.S. Patent No. 5,739,760, to Hatakeyama, in combination with U.S. Patent No. 6,085,238, to Yuasa et al.

In making their invention, Applicants were concerned with a configuration wherein a master controller is disposed to control operation of different physical devices, each device in turn used to control associated external devices of widely varying types. This configuration is disclosed, for example, in Fig. 1 of Applicants' drawings and at page 7, lines 1-22 of the specification. Applicants recognized that in a configuration of this type, control of the devices by the master controller could be made much more effective by providing the master controller with a dispatch component routing commands to a device manger. Upon receiving a command, the device manager controls operation of different devices by creating or constructing a virtual device to be coupled to the physical devices, in order to send control information thereto. These features are taught in the application, such as in Fig. 2 showing message dispatcher 56 and device manager 51, and at page 13, lines 30-32, at page 17, lines 11-30 and at page 18, lines 15-19. Claim 1 has now been amended to incorporate these features, and further recites first and second devices respectively coupled to the master

controller, the first and second devices respectively having first and second states representing a plurality of associated data values.

The Hatakeyama patent is directed to an arrangement wherein a master system controls a plurality of slave systems, and each slave system controls and monitors a group of individual control points. As shown by Fig. 1, each slave system has a representative status holding memory 8a-8c and a status holding memory 5, and the master system has status holding memories 9a-9c corresponding to memories 8a-8c, respectively. Hatakeyama teaches, such as at column 4, lines 32-36, that the purpose of its disclosure is to enable the system thereof to accommodate "an increase in the number of slave systems, without requiring an increase in the scale of the memory in the master system." As taught, for example, in claim 1 of Hatakeyama, this is achieved by dividing control points in a slave system into groups, each group having a common attribute, and then determining, while still within the slave system, the status of a single control point representing a group. Thereafter, the status is transferred from the slave system to the master system, that is, from a memory 8a-8c to the corresponding memory 9a-9c, as taught at column 4, lines 51-55. This arrangement enables a substantial reduction of the memory 9 of the master system, as emphasized at column 5, lines 4-7. Hatakeyama further emphasizes, at column 4, lines 56-67, and column 5, lines 1-3, that the arrangement thereof requires performance of "expansion" and "operations" within "each of the slave systems" (emphasis added). Thus, the primary mechanisms and processes for achieving the intended objectives of the Hatakeyama disclosure are located in the slave system thereof, not in the master system.

The Yuasa et al. patent, as stated at column 1, lines 5-19, is directed to a virtual local area network (VLAN) for controlling network traffic flow, and for providing logical segmentation of a network so that the network can be changed dynamically, following changes in workgroups and the like. As taught at column 7, lines 7-8, network segmentation is dynamically changed in response to a network user request.

Claim 1 as amended is considered to distinguish over the Hatakeyama patent, particularly in reciting, in the overall combination of Claim 1, a device manager disposed to

receive a command from the dispatch component of the master controller, and to control operation of first and second devices in response by constructing a virtual device, and coupling the virtual device to the first and second devices to provide control information thereto. Clearly, Hatakeyama does not show any device manager or other component disposed to control any of the slave systems thereof by constructing a virtual device in response to a command from the master system. Moreover, the Hatakeyama disclosure fails to in any way show or suggest coupling a virtual device to any of the slave systems thereof, to provide control information thereto. Hatakeyama, in fact, would have no use for either the device manager or virtual device of Applicants' amended Claim 1, since it achieves its results solely by means of status holding memories and associated components for performing "expansions" and "operations." In addition to being irrelevant to the Hatakeyama arrangement, the device manger and virtual device of Claim 1 could probably not be incorporated into Hatakayama without substantial modification nowhere suggested by the prior art.

Moreover, as indicated above, Hatakeyama teaches that essential components of its arrangement, such as memories 5 and 8 and components 21-25 of Fig. 2, are respectively contained in the slave systems of Hatakayama. In contrast, no components of Applicants' Claim 1 reside in either the first or second device of Claim 1. In view of this fundamental difference, Applicants consider that the Hatakeyama disclosure clearly teaches away from essential features and concepts recited by Claim 1. Thus, one of skill in the art would not consider modifying the Hatakeyama reference to realize the recitation of Applicants' Claim 1.

Claim 1 as amended is also considered to distinguish over the Yuasa et al. reference, particularly in reciting, in the overall combination of Claim 1, a device manager disposed to receive a command from the dispatch component of the master controller, and to control operation of the first and second devices in response to the command by constructing a virtual device, and coupling the virtual device to the first and second devices to provide control information thereto. Yuasa et al., in contrast, does not show any device manager or other component that constructs a virtual device in response to a command from a master

controller. Moreover, Yuasa, et al. does not show a virtual device coupled to a physical device to provide control information to the physical device, wherein the physical device is also coupled to a master controller. Rather, the Yuasa et al. arrangement, as clearly stated at column 7, lines 5-8, is only intended to dynamically change network segmentation in a VLAN.

Differences between Yuasa et al and the recitation of Claim 1 are further emphasized by the Yuasa et al. arrangement disclosed at column 34, lines 24-31 and Fig. 16, wherein a VLAN is connected to control the operation of slave switching hubs SH only through a master switch hub MH. Yuasa et al. thereby teaches a basic principle that is very different from an essential principle of Applicants' of Claim 1. In the recitation of Claim 1, the master controller is connected to control operation of first and second devices only through the virtual device.

As is very well know, references may not be combined under 35 USC §103 unless the prior art teaches some reason or motivation for making the combination. The Hatakeyama and Yuasa et al. references disclose arrangements that are both complex, but are completely unrelated to one another. Accordingly, neither reference in any way suggests combining elements of Hatakeyama and Yuasa et al. to realize the recitation of Applicants' Claim 1. Applicants are not aware of any other prior art that, in the absence of Applicants' teachings and without benefit thereof, would provide motivation for such combination.

Moreover, an essential teaching of the Hatakeyama patent, as stated for example in its abstract, is a master system that "performs monitoring and control of a plurality of slave systems." However, the Yuasa et al. patent, at column 7, lines 61-65, states explicitly that an important object thereof is to provide a virtual network system that will not rely on centralized management of the network. Thus, Yuasa et al. expressly teaches away from any effort to combine teachings of Yuasa et al. with the arrangement of Hatakeyama, which clearly requires the centralized management provided by its master system.

Application No. 09/328,111
Amendment Dated: August 21, 2003
Reply to Office Action of June 23, 2003

Attorney Docket No. 126239-1003

Claims 2-20 respectively depend from Claim 1, and are each considered to distinguish over the art for the same reasons given in support thereof.

In addition, Claim 5 is considered to distinguish over the art in reciting that the device manager comprises a component of the master controller. Neither of the cited references is considered to show or suggest a device manager disposed to construct a virtual device, wherein the device manager is a component of a master controller or the like.

Independent Claims 21 and 37, as amended, are respectively considered to incorporate subject matter similar to patentable subject matter recited by Claim 1. Accordingly, such claims are each considered to patentably distinguish over the prior art for the same reasons given in support thereof.

Claims 22-36 and Claims 38-45 depend from Claims 21 and 37, respectively. Accordingly, such claims are considered to patentably distinguish over the prior art for the same reasons given in support thereof.

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CONCLUSION

In light of the arguments set forth above, Applicants respectfully submit that the Application is now in allowable form. Accordingly, Applicants respectfully request consideration and allowance of the currently pending claims.

It is believed that no additional fees are due at this time. If this is incorrect, Applicants hereby authorize the Commissioner to charge any fees, other than the issue fees, that may be required by this paper to Deposit Account No. 07-0153. The Examiner is respectfully requested to call Applicants' Attorney for any reason that would advance the current application to issue. Please reference Attorney Docket No. 126239-1003.

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